

The opinion in support of the decision being entered
today was not written for publication and
is not binding precedent of the Board

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HAMID HUSSAIN,
ROBERT R. MCDANIEL and
MICHAEL J. CALLANAN

Appeal No. 1999-2815
Application No. 08/641,827

HEARD: JULY 11, 2002

Before OWENS, LIEBERMAN and PAWLIKOWSKI, Administrative Patent
Judges.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the final
rejection of claims 1-19 and 39-46. Claims 20-32 have been
withdrawn in view of a restriction requirement.

The subject matter on appeal is represented by claim 1 which
is reproduced below:

1. A proppant particle comprising:
a particulate substrate; and
a coating comprising resin and fibrous material, wherein the
fibrous material is embedded in the coating to be dispersed
throughout the coating.

The references relied upon by the examiner as evidence of unpatentability are:

Graham ('651)	3,659,651	May 2, 1972
Wimmer	3,720,540	Mar. 13, 1973
Graham et al. (Graham '627)	4,527,627	Jul 9, 1985
Hermann et al. (Hermann)	5,256,703	Oct. 26, 1993

Claims 1-19 and 43-46 stand rejected under 35 U.S.C. § 103 as being unpatentable over Graham '627 in view of Graham '651 or Wimmer.¹

Claims 39-42 stand rejected under 35 U.S.C. § 103 as being unpatentable over Graham '627 in view of Graham '651 or Wimmer, and further in view of Hermann.

OPINION

For the reasons set forth in the brief and reply brief, and below, we will reverse each of the aforementioned rejections.

On page 5 of the brief, appellants state that Wimmer is applicable to the bath tub coating art. Appellants argue that the bath tub coating art is non-analogous to the proppant coating art. Appellants state that Wimmer employs long fibers. Appellants state that there is no guarantee that the reinforcement achieved by Wimmer (using long fibers on a large substrate) would occur for fibers sufficiently small to be employed with small proppant particles as a substrate. Appellants further state that one skilled in the art would not look to the bath tub coating art for guidance in the high

¹ We note that Paper No. 26 (a communication from the examiner) indicates that claims 43-46 were inadvertently omitted from this rejection. Hence, we have included these claims in this rejection.

pressure proppant art. (brief, pages 5-6). On page 7 of the brief, appellants argue that the long fiber disclosed in Wimmer would be inoperative and defeat the purpose of Graham '627.

We observe that in the paragraph bridging pages 6-7 of the answer, the examiner does not address every point raised by appellants regarding the non-analogous art argument regarding Graham '627 and Wimmer. The examiner simply states that Wimmer teaches that use of fibers results in reinforcement, and that it is "quite obvious . . . to use fibers of very small length for proppants than those for a bath tub [bathtub]".

Hence, we find that the examiner has insufficiently addressed the issue of whether one skilled in the art would look to the glass fiber reinforced plastic articles art (such as the bath tub art of Wimmer) to solve a problem in the proppant art. In view of the fact that the examiner has not satisfied this burden, we agree with appellants' position in this regard.

With respect to the combination of Graham '627 in view of Graham '651, appellants argue that Graham '651 is concerned with dimensional stability of its resin particles and that dimensional stability relates to whether the proppant will flatten. Appellants state that this is important when there is no substrate, as in Graham '651. Appellants point out that this is irrelevant with regard to Graham '627, where an actual substrate is employed. Appellants further explain that Graham '651 relates to deformable proppant for monolayer patterning. To the contrary, appellants state that coatings are employed in Graham '627 to improve crush strength. Appellants state that thus the increase in dimensional stability of Graham '651 is irrelevant to the coated proppant of Graham '627, and would not motivate one

skilled in the art to employ the fibers of Graham '651, in the coated proppant of Graham '627.

We agree with appellants' arguments summarized above for the following reasons.

Graham '651 is directed to propping agents composed of reinforced synthetic resins. See column 1, lines 65-70. Fibrous reinforcements are used to provide improvement in compressive strength. See column 2, lines 31-34. Graham '651 discloses that laboratory data indicate that glass reinforced nylon proppants are capable of propping fractures at closure stresses generally considered too high for conventional propping agents. See column 3, lines 30-35. Graham '651 also indicates that the data demonstrates that the reinforced nylon proppants undergo less deformation than unreinforced nylon and therefore retain a larger percentage of original thickness and maintain the fracture in a wider propped condition. See column 3, lines 35-40.

We find that the examiner has not explained how such reinforcement as described in Graham '651 (as summarized above) would be applicable to Graham '627. On page 6 of the answer, the examiner states that Graham '651 teaches that reinforcing a resin with fibers enhances the dimensional stability of the coating so formed. The examiner asserts that this teaching is "good enough to act as a strong motivation to one of ordinary skill in the art to use fibers to further reinforce the coating of Graham '627." We find that such a conclusory statement is insufficient to rebut the points made by appellants.

We also observe that the examiner states that "Graham '651 teaches in column 3, lines 24-27, that reinforcing a resin with fibers enhances the dimensional stability of the coating so

formed". (answer, page 6). This is an incorrect interpretation of Graham '651 because, in fact, Graham '651 does not use a coating on a substrate. For example, Graham '651 discloses that the preferred propping agent is composed of thermoplastics reinforced with fibers. Pellets composed of fiberglass reinforced nylon have proven particularly effective in propping fractures. See column 4, lines 65-74.

In view of the above, we determine that the examiner has not convincingly set forth a prima facie case. Therefore, we reverse each of the rejections of record. We note that we need not discuss the merits of the other reference, Hermann, because Hermann does not cure the deficiencies found in the combination of other references.

CONCLUSION

The decision of the examiner is reversed.

REVERSED

Terry J. Owens)	
Administrative Patent Judge)	
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Paul Lieberman)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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